

DEPARTMENT OF ENVIRONMENTAL QUALITY

BUILDING #2

HVAC SYSTEM UPGRADE

DFCM PROJECT NO. 06170310

SALT LAKE CITY, UTAH

DFCM DESIGN AND CODE CRITERIA

(Fee A.E: Attach and fill in applicable data for each drawing submittal)

Applicable Codes:

International Building Code

Planning & Design Criteria to Prevent Architectural Barriers for the Aged and the Physically Handicapped.

Year

2003

International Mechanical Code

2003

International Plumbing Code

2003

Ashrae/IES Energy Code

90.1-1999-2003

National Electrical Code

2005

A. Occupancy and Group :

N/A

EXISTING

Change in Use :

Yes

No

X

Mixed Occupancy :

Yes

X

No

B. Type of Construction (Circle)

I

II

III

IV

V

F.R.

F.R.

1 HR.

1 HR.

1 HR.

1 HR.

1 HR.

N

N

N

N

N

C. Location on Property :

F.R. Ext. Walls (Hrs.):

N/A

Ext. Wall Opening(s) Protection (Hrs.)

N/A

D. Occupancy separation required (Hrs.):

EXISTING

Sprinklered: Indicate Yes or No

Yes

No

Stories :

1 or multiple

a. Actual Area²(ft)

EXISTING

N/A

b. Basic allowable area :

%

Area (ft)

%

Area (ft)

%

Area (ft)

c. Allowable Area Increase due to side yards: N.A.

N/A

N/A

N/A

d. Side yard area increase (ft):

N/A

Accumulative sub-total (b=d):

N/A

Sprinkler: area increase (x3 single)

N/A

(x 2 multi)

N/A

e. Total Allowable Area for a single story:

N/A

x 2 for multi-story building:

N/A

f. Ratio = a/e (Actual divided by allowable)

N/A

E. Fire-Resistive Requirements (Hrs.): (1 Hr., 2Hr., 3Hr., 4Hr., N. H.T.) EXISTING

Exterior Bearing Walls:

N/A

Floors - Ceiling Floors

N/A

Interior Bearing Walls:

N/A

Roofs - Ceiling Roofs

N/A

Exterior Non-bearing Walls:

N/A

Exterior Doors and Windows

N/A

Structural Frame:

N/A

Shaft Enclosures

N/A

Partitions - Permanent:

N/A

(OCCUPANCY SEPARATION - N/A)



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SUITE 200

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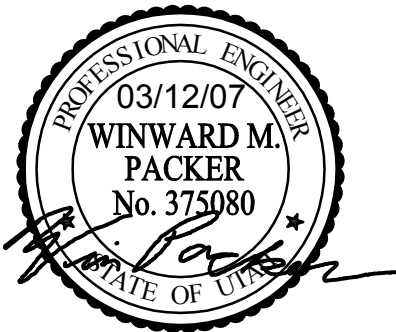
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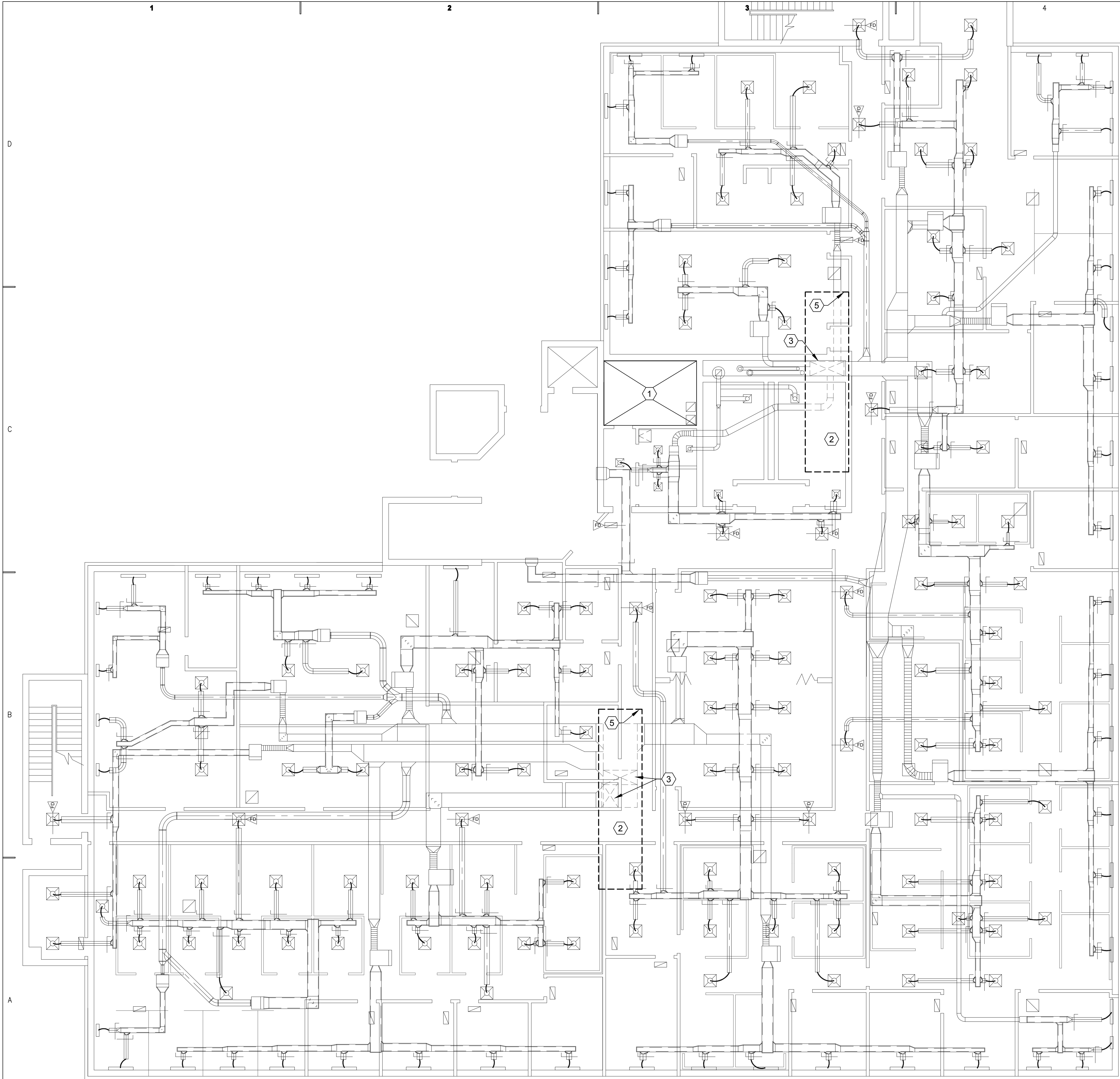
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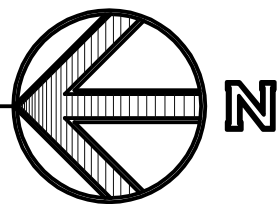
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DRAWING INDEX:	
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M001	MECHANICAL GENERAL NOTES AND LEGEND
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MD102	ROOF MECHANICAL DEMOLITION PLAN
MD103	BOILER ROOM DEMOLITION DETAILS
MD401	LARGE SCALE BOILER ROOM DEMOLITION PLAN
ME101	2ND FLOOR MECHANICAL PLAN
ME102	NEW ROOF MECHANICAL PLAN
ME401	LARGE SCALE BOILER ROOM PLAN
ME501	MECHANICAL DETAILS
ME601	MECHANICAL SCHEDULES
ME701	HOT WATER FLOW SHEET



BUILDING #2-2nd FLOOR MECHANICAL DEMOLITION PLAN
SCALE: 1/8" = 1'-0"



SHEET NOTES:


- ① SEE LARGE SCALE PLAN SHEET MD401 FOR THIS AREA.
- ② OUTLINE OF EXISTING ROOF TOP UNIT. SEE ROOF MECHANICAL DEMOLITION PLAN MD102.
- ③ DISCONNECT EXISTING S.A. DUCTWORK, FLEX CONNECTIONS ETC. ALL DUCTWORK CONNECTIONS TO EXISTING ROOF TOP UNITS SHALL BE REMOVED.
- ④ AL EXISTING DUCTWORK, DIFFUSERS, VAV BOXES, ETC. SHALL REMAIN AS-IS.
- ⑤ DISCONNECT ELECTRICAL FROM EXISTING ROOF TOP UNITS. MODIFY TO RECONNECT TO NEW ROOF TOP UNITS.

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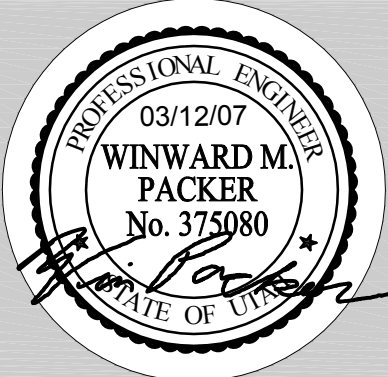
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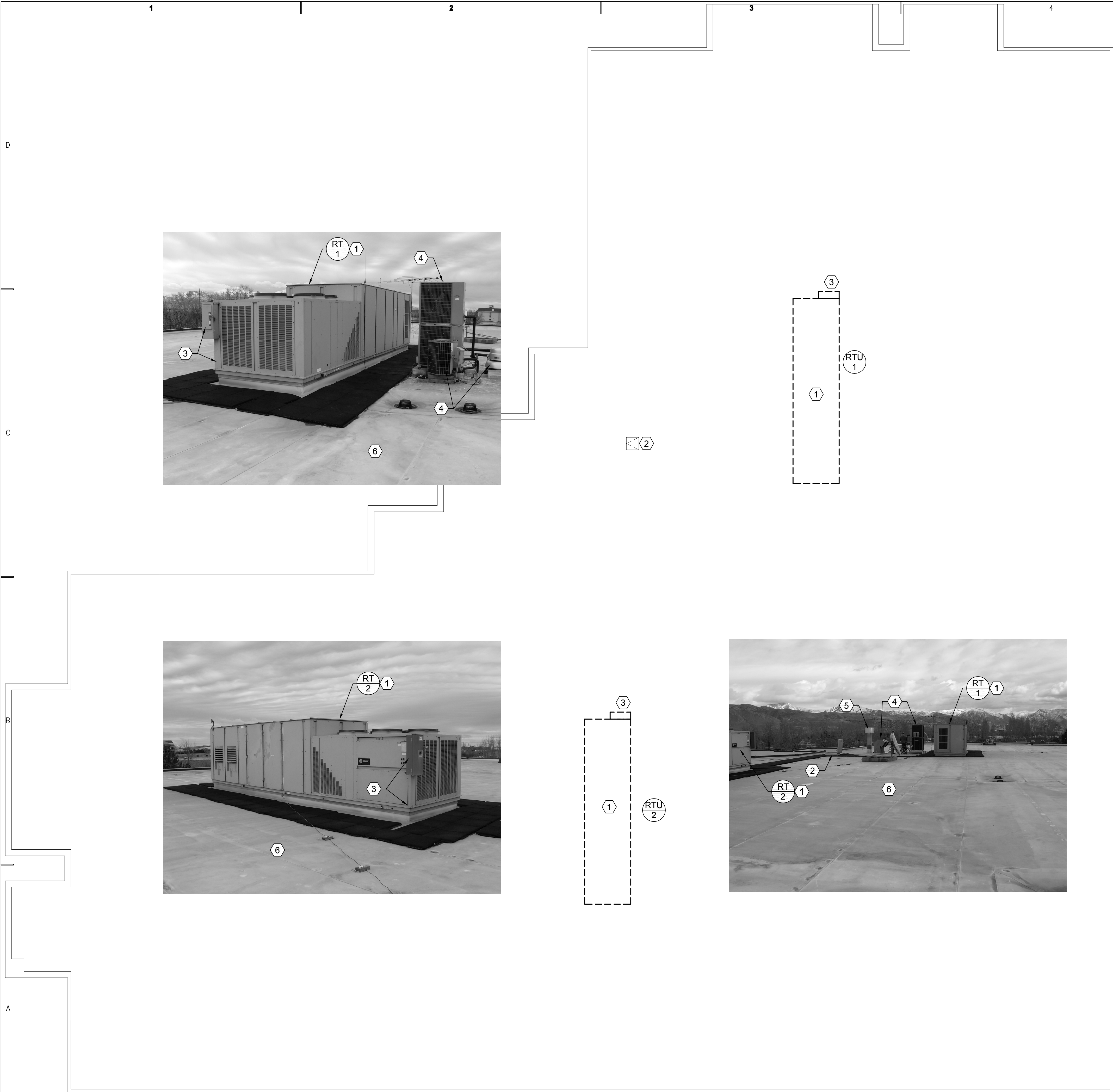
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SHEET TITLE
**2ND FLOOR MECHANICAL
DEMOLITION PLAN**

SHEET NO.
MD101



BUILDING #2-ROOF MECHANICAL DEMOLITION PLAN
SCALE: 1/8" = 1'-0"

SHEET NOTES:

- 1 REMOVE EXISTING ROOF TOP UNITS, DUCTWORK CONNECTIONS, AND ALL ASSOCIATED ITEMS. EXISTING ROOF CURB SHALL REMAIN AND BE ADAPTED FOR THE NEW ROOF TOP UNIT.
- 2 EXISTING ROOF HATCH ACCESS.
- 3 ELECTRICAL DISCONNECTS SHALL BE REMOVED. ELECTRICAL SUPPLY SHALL BE DISCONNECTED FROM EXISTING ROOF TOP UNITS BUT SAVED FOR NEW UNITS.
- 4 EXISTING EQUIPMENT SHALL REMAIN.
- 5 EXISTING BOILER STACK SHALL REMAIN AND BE REUSED.
- 6 PROTECT SINGLE PLY ROOF DURING DEMOLITION, ROOT TRAFFIC, DRAGGING EQUIPMENT, MATERIALS, ETC. ALL DAMAGE ROOFING SHALL BE PATCHED REPAIRED BY ORIGINAL ROOFING CONTRACTOR TO MAINTAIN WARRANTEE.

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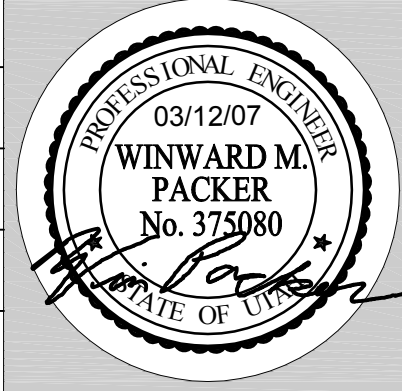
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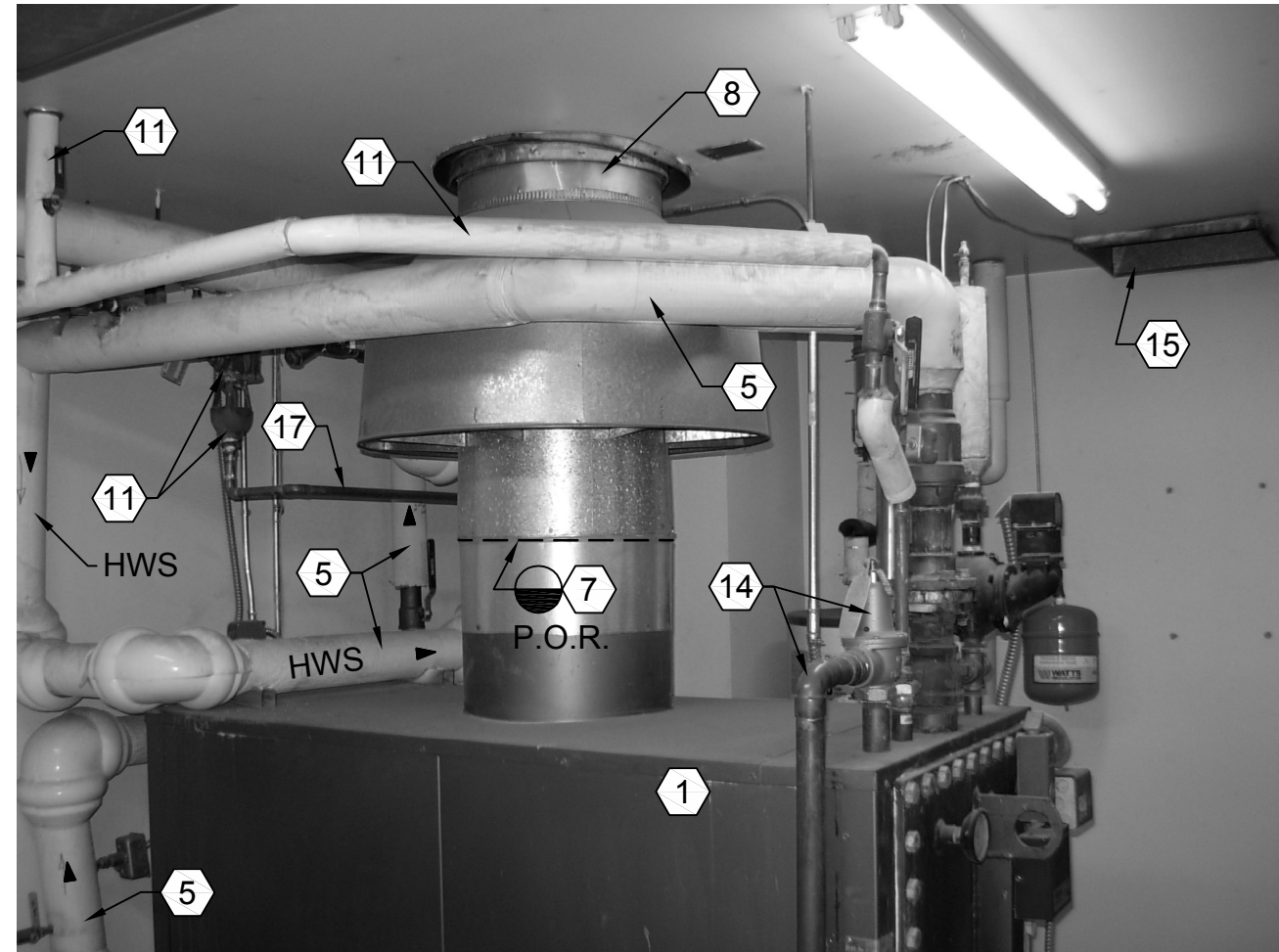
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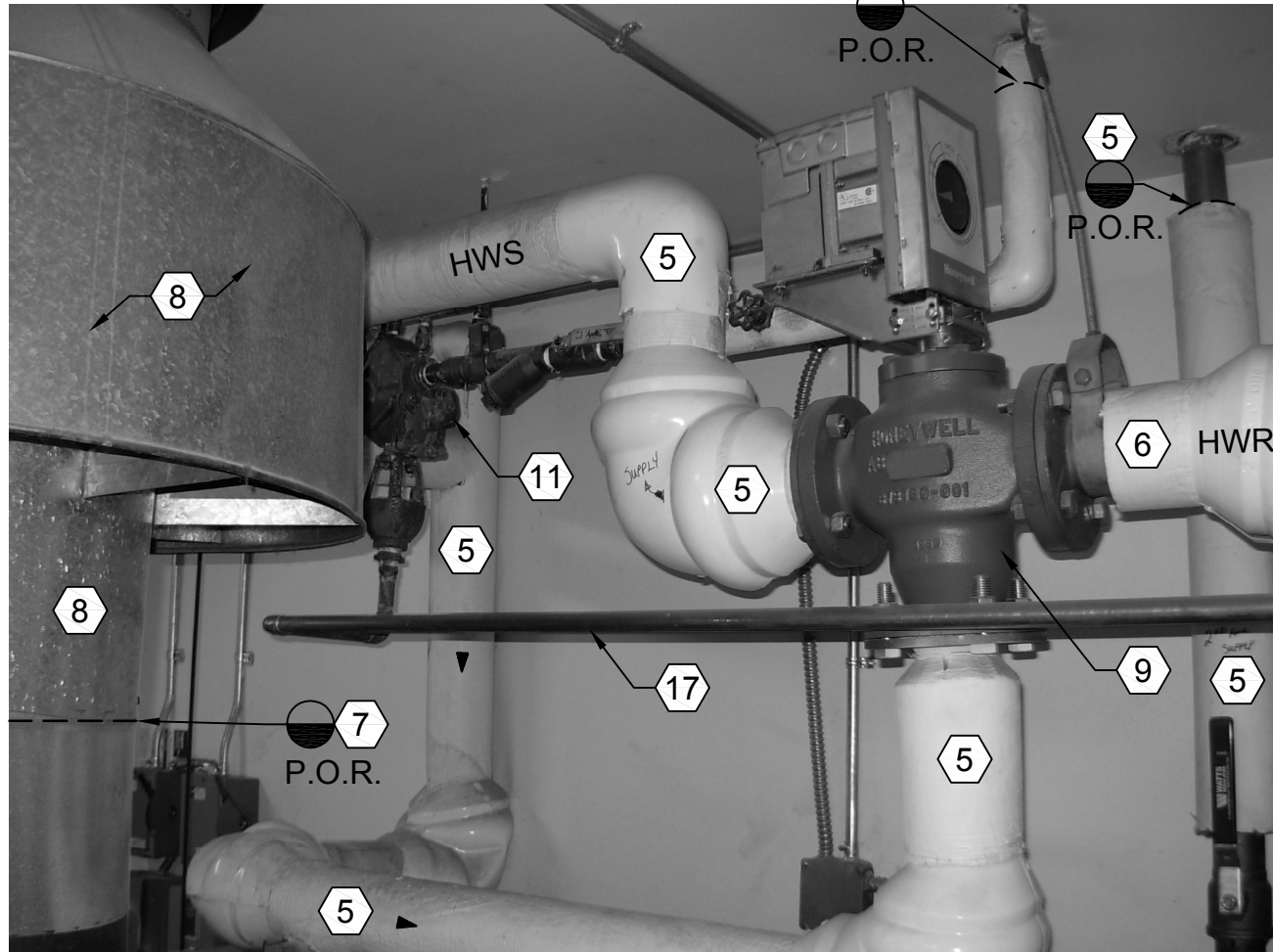


SHEET TITLE
**ROOF MECHANICAL DEMOLITION
PLAN**

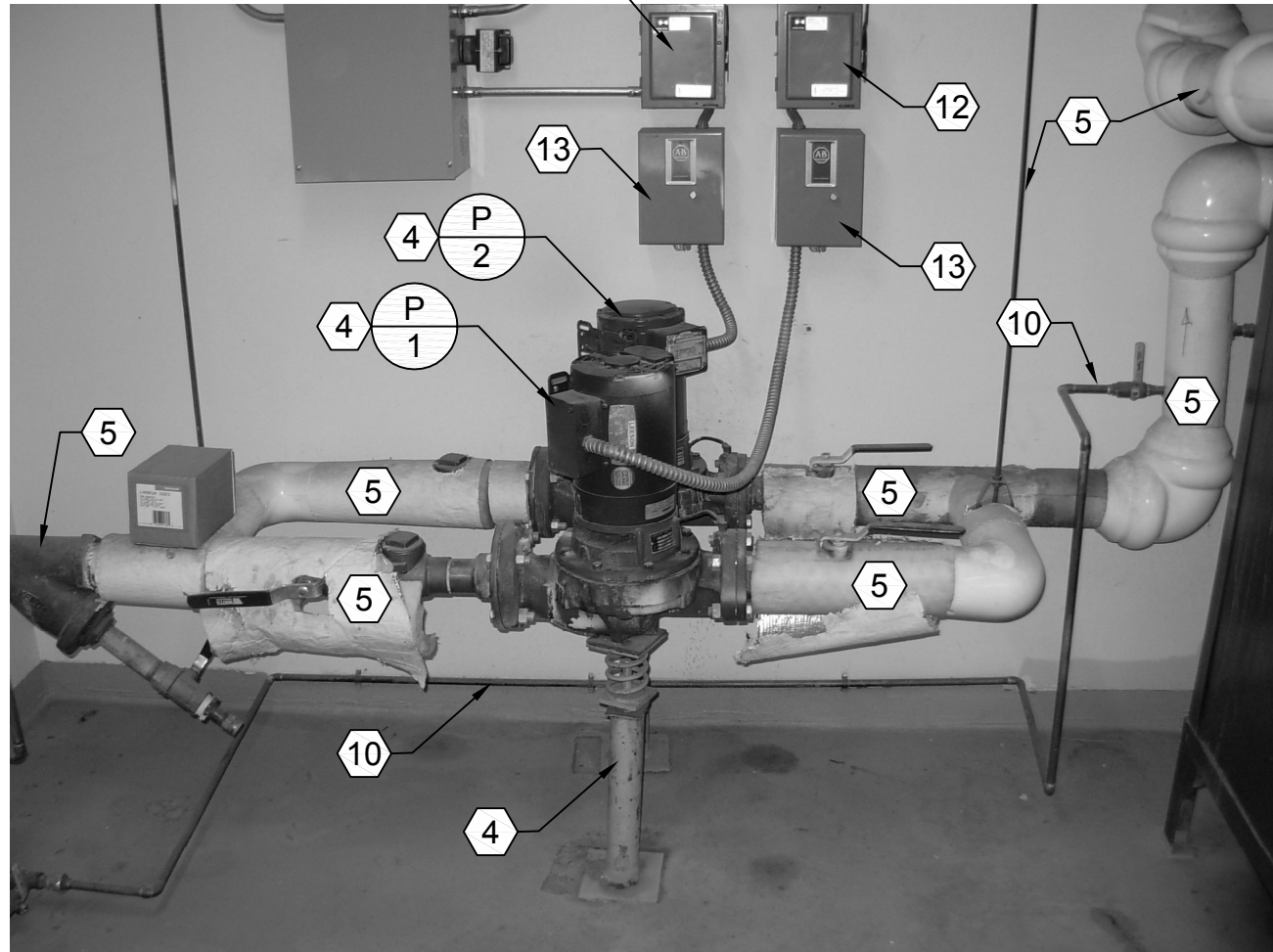
SHEET NO.
MD102



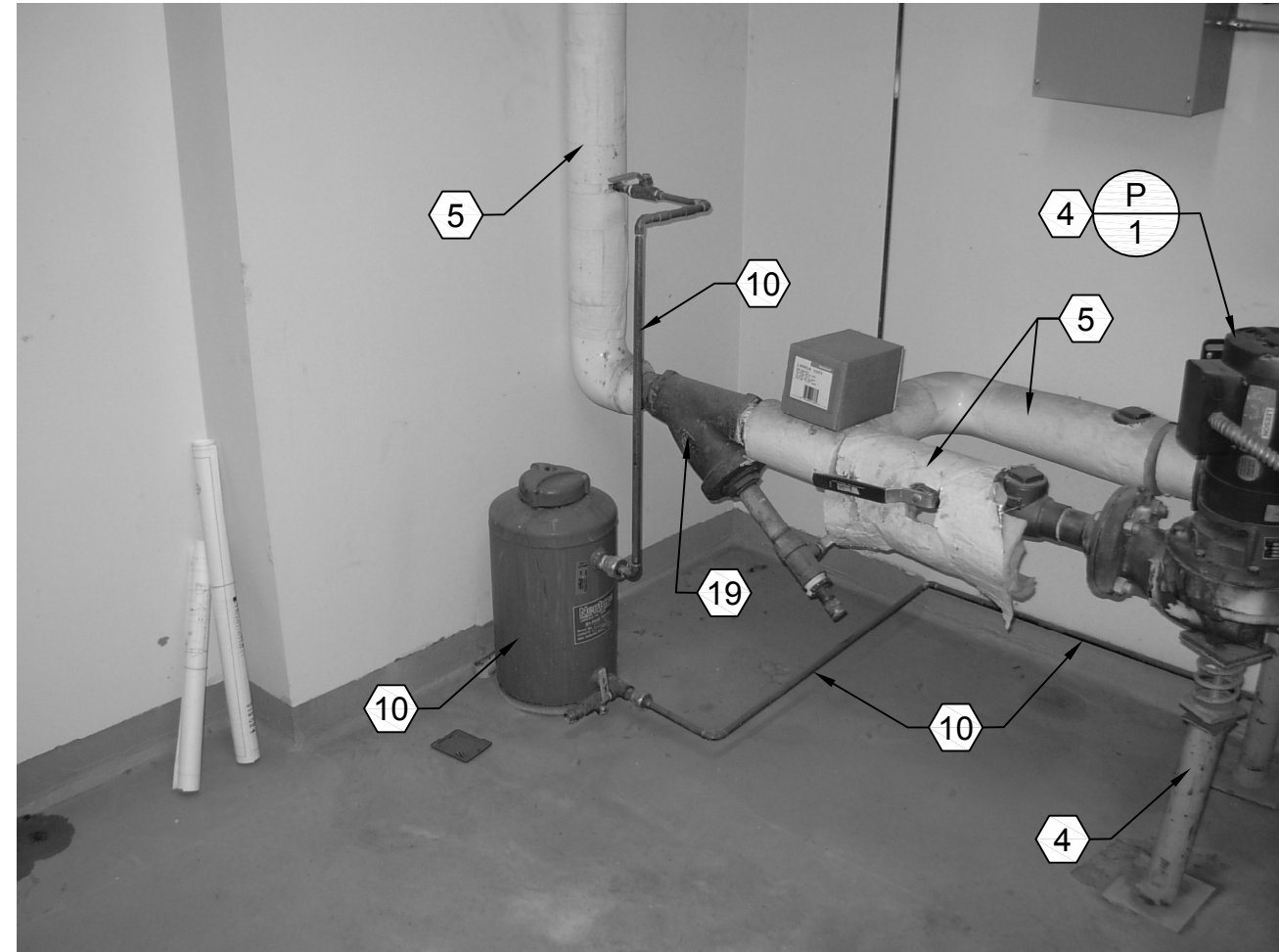
C1 BOILER AND FLUE DEMOLITION
SCALE: NONE



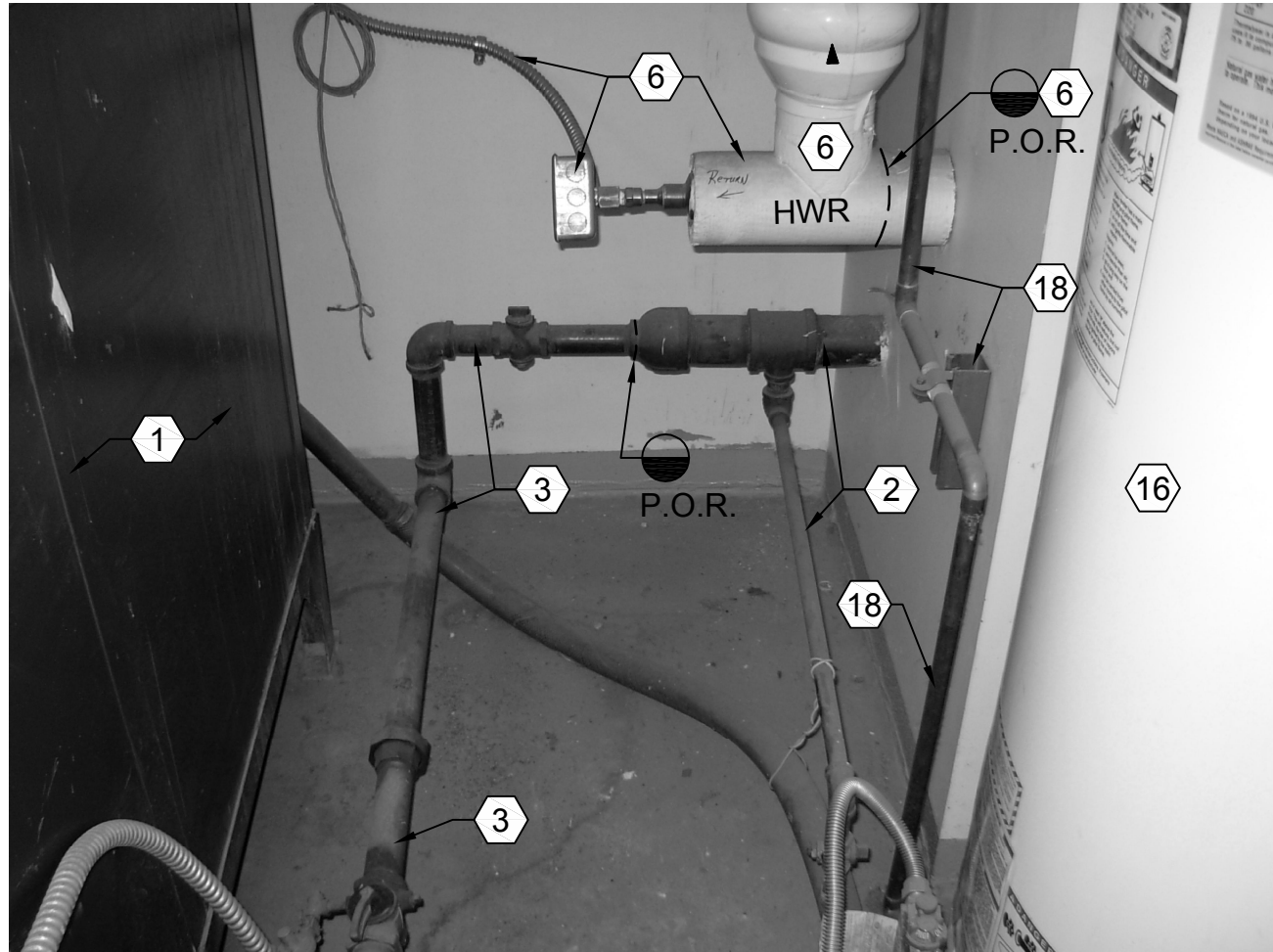
C2 3 WAY MIXING VALVE
PIPING DEMOLITION
SCALE: NONE



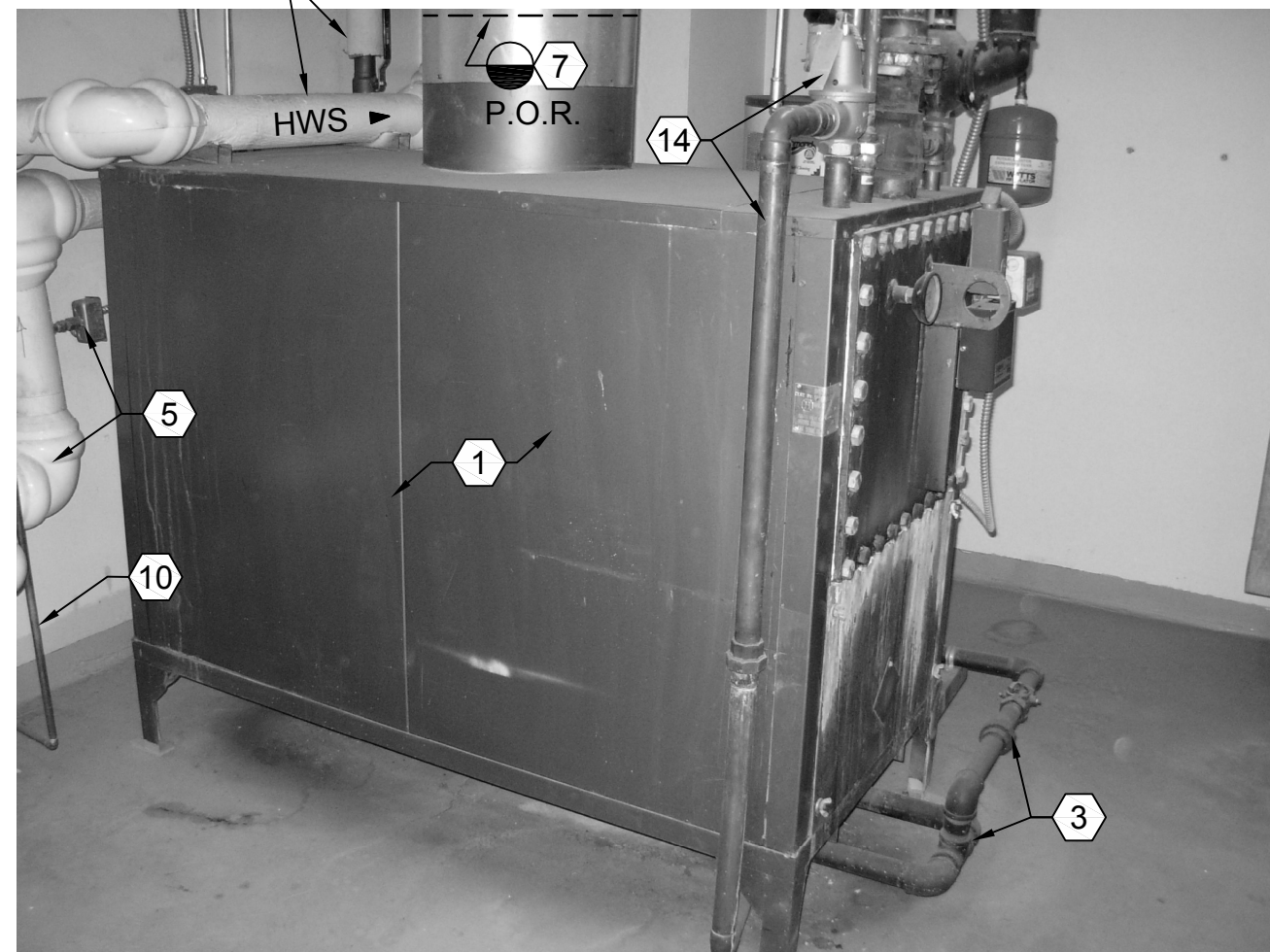
C3 HOT WATER PUMPS DEMOLITION
SCALE: NONE



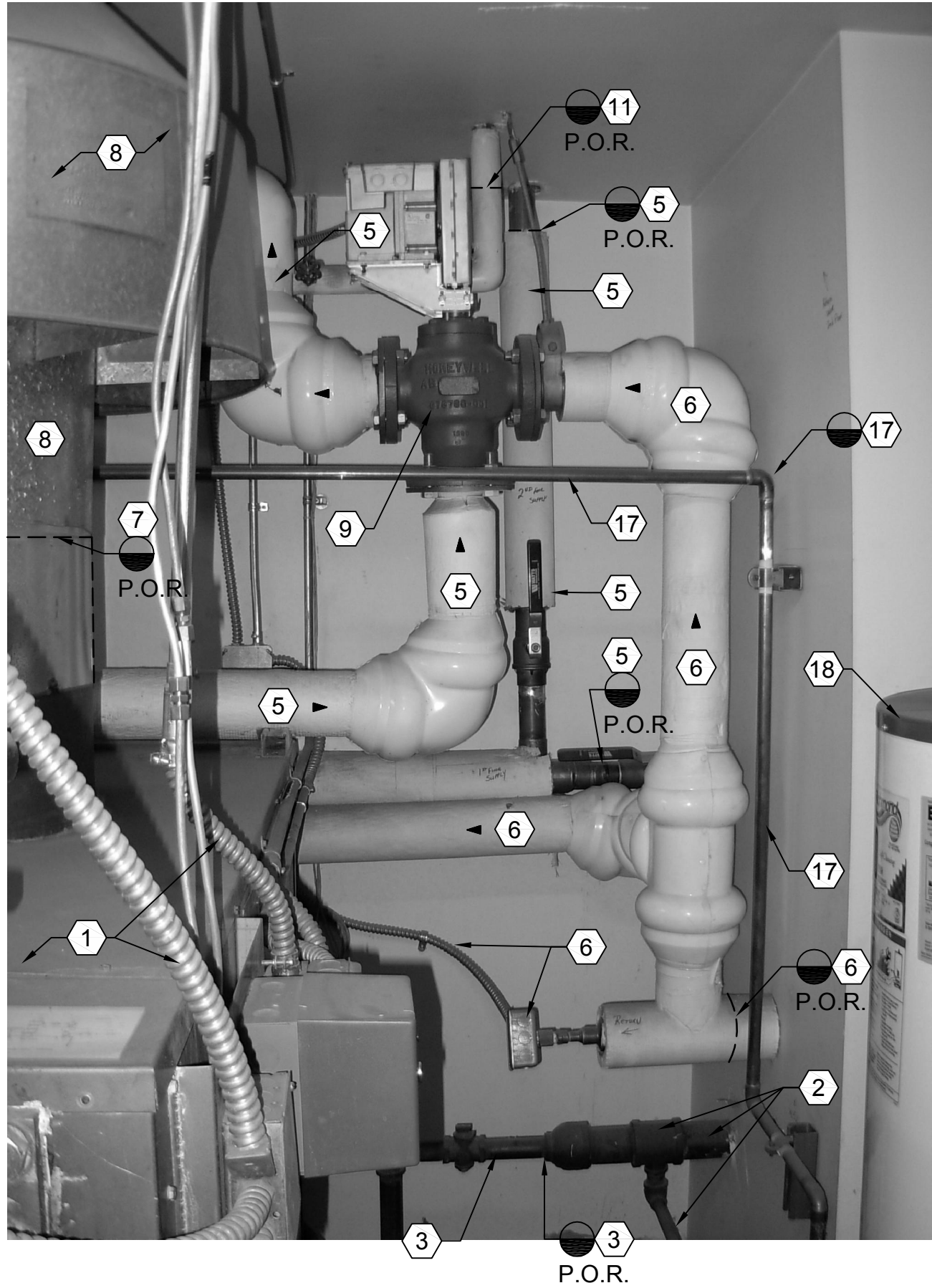
B1 CHEMICAL POT FEEDER AND
PIPING DEMOLITION
SCALE: NONE



B2 GAS PIPING DEMOLITION
SCALE: NONE



A1 BOILER DEMOLITION
SCALE: NONE



A3 HOT WATER SUPPLY AND
RETURN PIPING DEMOLITON
SCALE: NONE

SHEET NOTES:

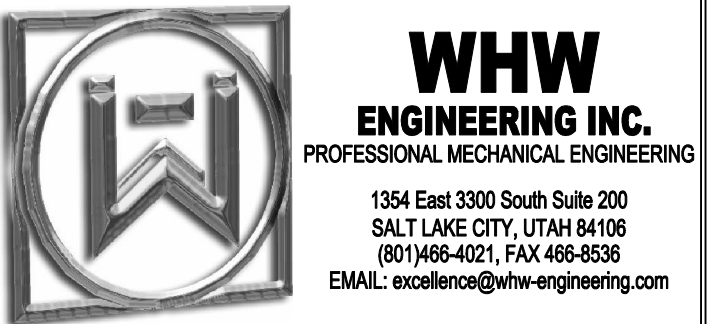
- 1 REMOVE BOILER AND ALL ASSOCIATED ITEMS, PIPING, AND EQUIPMENT.
- 2 EXISTING 3" GAS PIPING AND GAS PIPING TO CULINARY HOT WATER HEATER SHALL REMAIN.
- 3 REMOVE EXISTING GAS LINE TO GAS TRAIN AND BOILER.
- 4 REMOVE EXISTING PUMPS AND ASSOCIATED VALVES, ETC.
- 5 REMOVE EXISTING HWS, VALVES, FITTINGS, HANGERS ETC.
- 6 REMOVE EXISTING HWR, VALVES, FITTINGS, HANGERS ETC.
- 7 REMOVE EXISTING STACK TO POINT SHOWN.
- 8 EXISTING STACK THROUGH CEILING AND ROOF SHALL REMAIN.
- 9 EXISTING 3-WAY AUTO VALVE SHALL BE REMOVED AND SAVED FOR CONNECTION TO NEW PIPING.
- 10 REMOVE EXISTING CHEMICAL POT FEEDER, PIPING AND VALVES.
- 11 REMOVE MAKE-UP WATER, BACK FLOW PREVENTER, VALVES AND PIPING TO POINT SHOWN.
- 12 REMOVE EXISTING PUMP DISCONNECTS.
- 13 REMOVE EXISTING PUMP STARTERS.
- 14 REMOVE EXISTING RELIEF VALVE AND PIPING.
- 15 18"x18" HIGH COMBUSTION AIR OPENING.
- 16 EXISTING CULINARY HOT WATER HEATER C SHALL REMAIN.
- 17 REMOVE DRAIN LINE, SUPPORTS ETC.
- 18 TS SECTION OF DRAIN PIPING SHALL REMAIN.
- 19 REMOVE EXISTING STRAINER.

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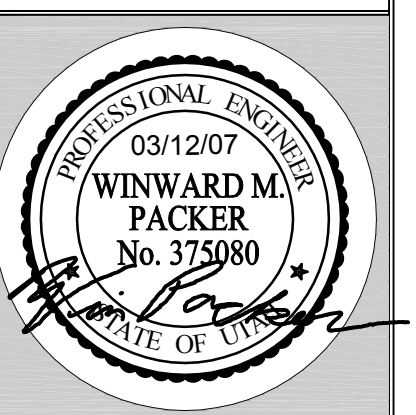
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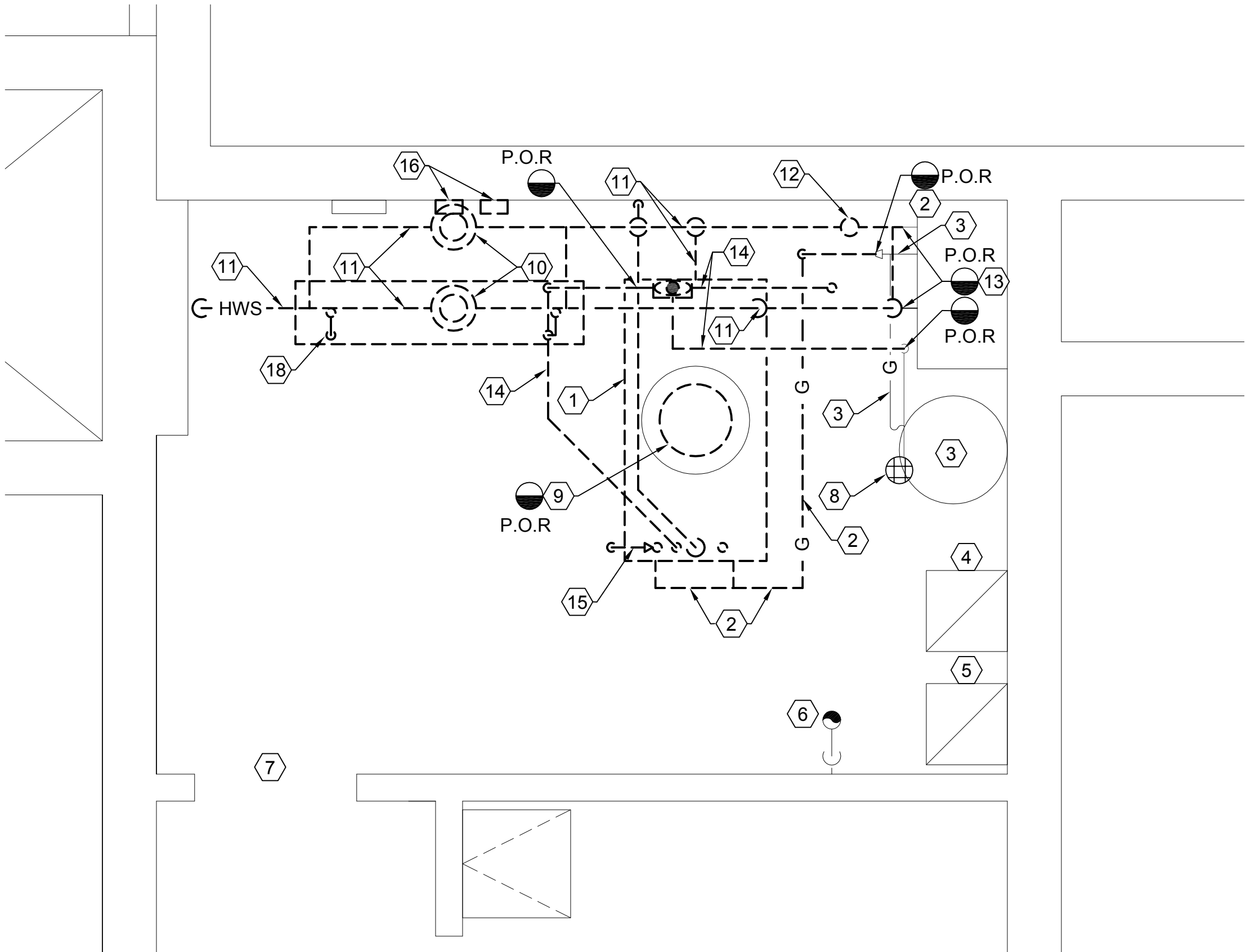
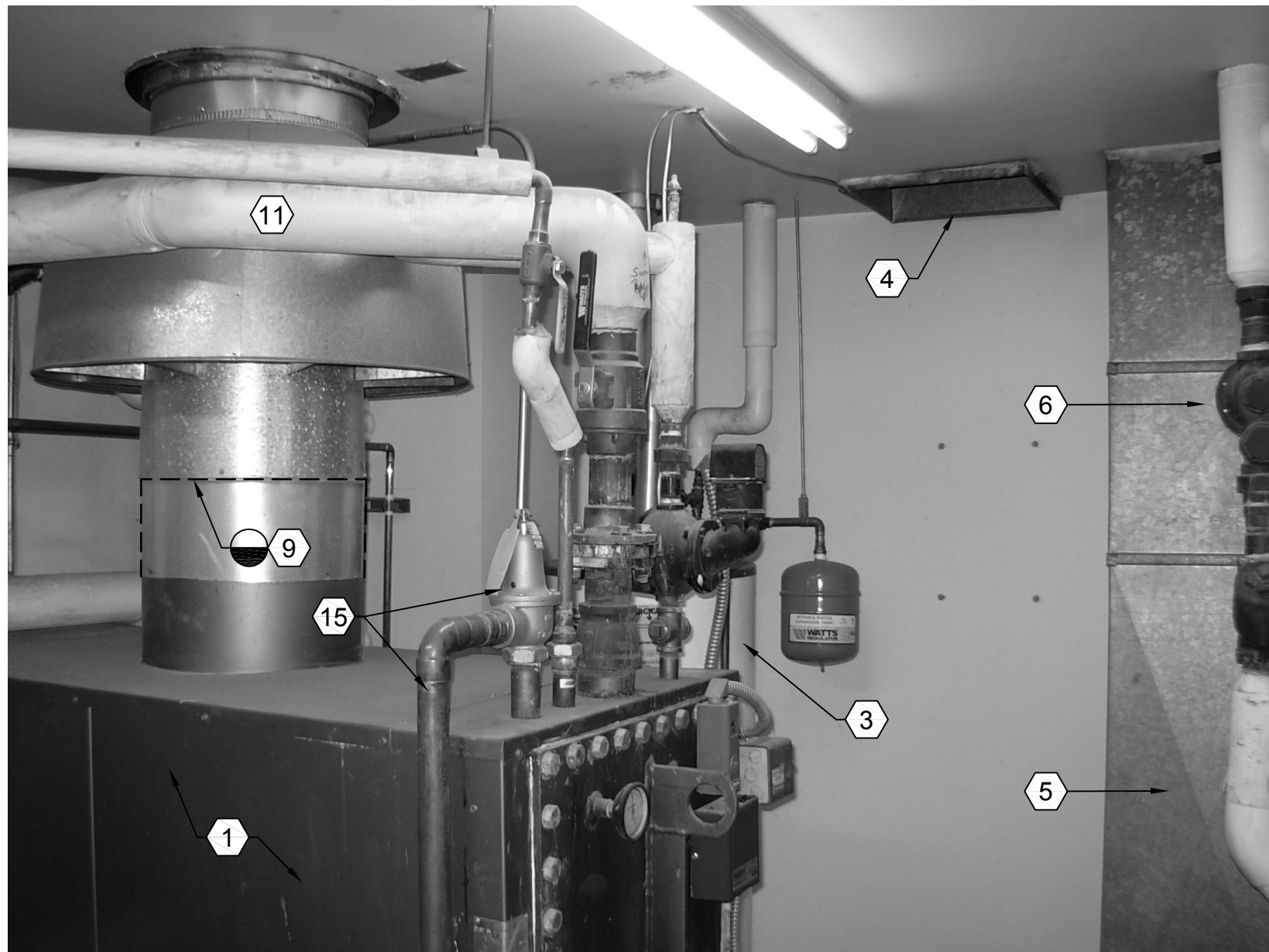


SHEET TITLE

BOILER ROOM DEMOLITION
DETAILS

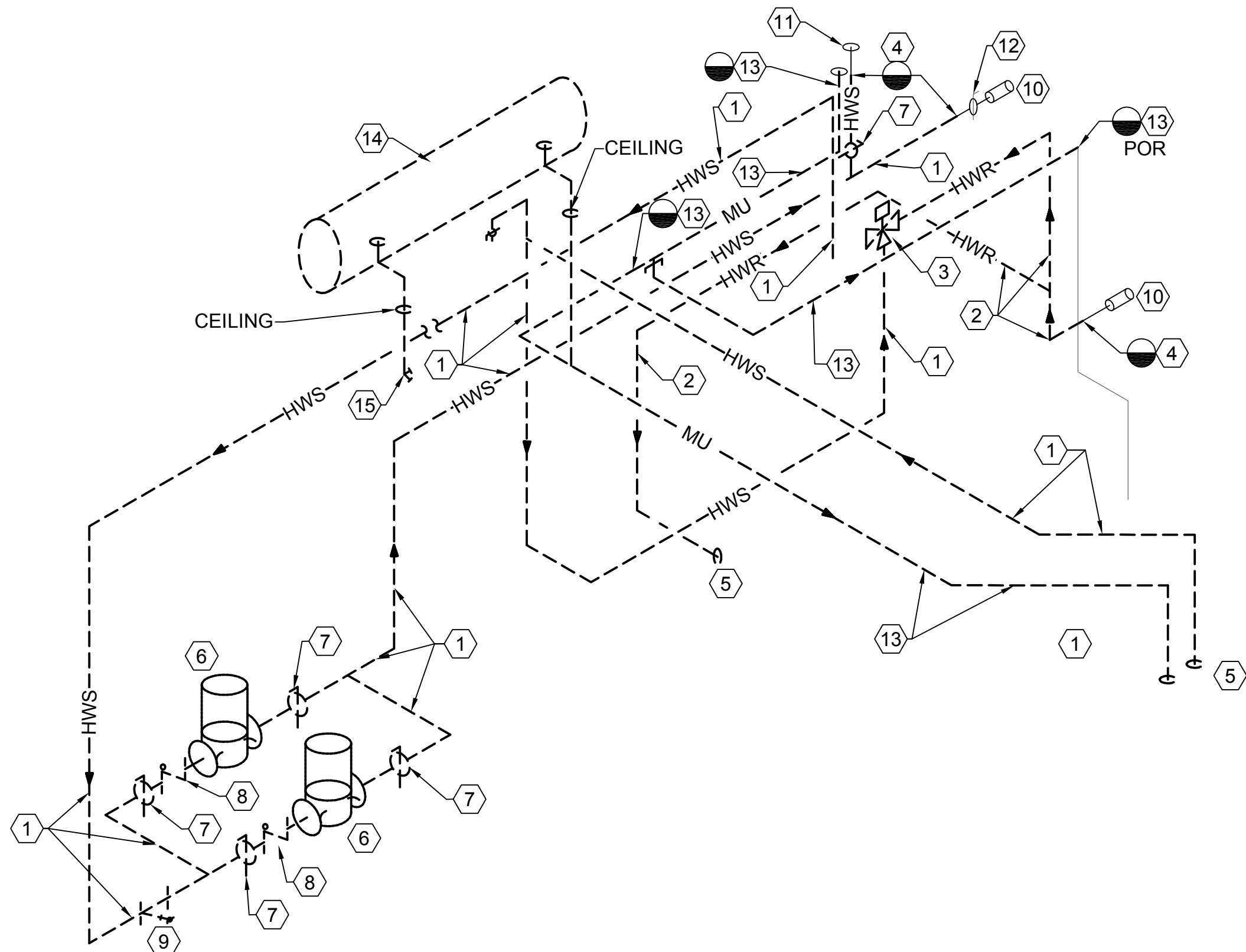
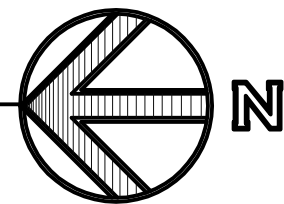
SHEET NO.

MD103



BUILDING #2-LARGE SCALE BOILER ROOM DEMOLITION PLAN

SCALE: 1/2" = 1'-0"



EXISTING HOT WATER PIPING DEMOLITION ISOMETRIC

SCALE: NONE

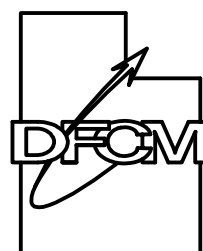
SHEET NOTES:

- 1 REMOVE EXISTING GAS FIRED HOT WATER BOILER COMPLETE WITH ALL PIPING CONNECTIONS, STACK CONNECTION, ELECTRICAL AND CONTROLS.
- 2 REMOVE EXISTING GAS TRAIN, CONTROLS ETC. BACK TO REDUCER.
- 3 EXISTING CULINARY GAS FIRED HOT WATER HEATER AND GAS LINE SHALL REMAIN.
- 4 EXISTING HIGH 18"x18" COMBUSTION AIR DUCT SHALL REMAIN.
- 5 EXISTING LOW 18"x18" COMBUSTION AIR DUCT SHALL REMAIN.
- 6 EXISTING CULINARY DOMESTIC WATER VERTICAL PRV STATION AND BUILDING SHUTOFF SHALL REMAIN.
- 7 USE EXISTING 3'-0" DOOR FOR ROOM ACCESS AND EQUIPMENT REMOVAL.
- 8 EXISTING FLOOR DRAIN SHALL REMAIN.
- 9 DISCONNECT BEFORE DRAFT DIVERTER. REUSE STACK FOR RECONNECTION TO NEW BOILER.
- 10 REMOVE EXISTING PUMPS, DISCONNECTS, STARTERS ETC.
- 11 REMOVE EXISTING HOT WATER PIPING SUPPLY, RETURN MIXING ETC. INCLUDING VALVES, STRAINERS ETC.
- 12 REMOVE 2" HWS TO 2ND FLOOR 10" BELOW BOILER CEILING FOR CONNECTION TO NEW HWS PIPING.
- 13 LEAVE A MINIMUM OF 6" FOR CONNECTION TO NEW PIPING. SEE SHEET ME401.
- 14 REMOVE WATER MAKE UP TO SYSTEM INCLUDING BACK FLOW PREVENTER, PRV, AND ALL VALVES.
- 15 REMOVE PRESSURE RELIEF VALVE, PIPING HANGERS ETC. TO FLOOR DRAIN.
- 16 REMOVE EXISTING PUMP DISCONNECTS AND PUMP STARTERS (ONE UNDERNEATH THE OTHER), C/W CONDUIT, FLEX CONDUIT AND WIRING.
- 17 REMOVE EXISTING COMPRESSION TANK SUPPORTS, PIPING, ETC. LOCATED IN CEILING SPACE.
- 18 REMOVE EXISTING DRAIN PIPING AND HOSE BIBB. PATCH CEILING OPENING LEFT BY THE REMOVAL OF PIPNG.

ISOMETRIC SHEET NOTES:

- 1 REMOVE EXISTING HOT WATER SUPPLY PIPING, HANGERS, VALVES ETC.
- 2 REMOVE EXISTING HOT WATER RETURN PIPING, HANGERS, VALVES ETC.
- 3 REMOVE EXISTING 3-WAY CONTROL VALVE AND SAVE FOR NEW INSTALLATION.
- 4 REMOVE EXISTING PIPING TO THIS POINT AND CONNECT NEW PIPING AT THIS LOCATION.
- 5 BOILER CONNECTIONS.
- 6 REMOVE EXISTING PUMPS.
- 7 REMOVE EXISTING BALL VALVES.
- 8 REMOVE EXISTING CHECK VALVES.
- 9 REMOVE EXISTING STRAINER.
- 10 PIPING THROUGH WALL SHALL REMAIN.
- 11 PIPING THROUGH CEILING SHALL REMAIN.
- 12 EXISTING BALL VALVES SHALL REMAIN.
- 13 REMOVE EXISTING MAKE-UP WATER PIPING INCLUDING BALL VALVES, PIPING, BACK FLOW PREVENTER, PRV, DRAIN, ETC.
- 14 REMOVE EXISTING COMPRESSION TANK, SUPPORTS, PIPING, ETC. LOCATED IN CEILING SPACE.
- 15 REMOVE EXISTING DRAIN PIPING AND HOSE BIBB. PATCH CEILING OPENING LEFT BY THE REMOVAL OF PIPNG.

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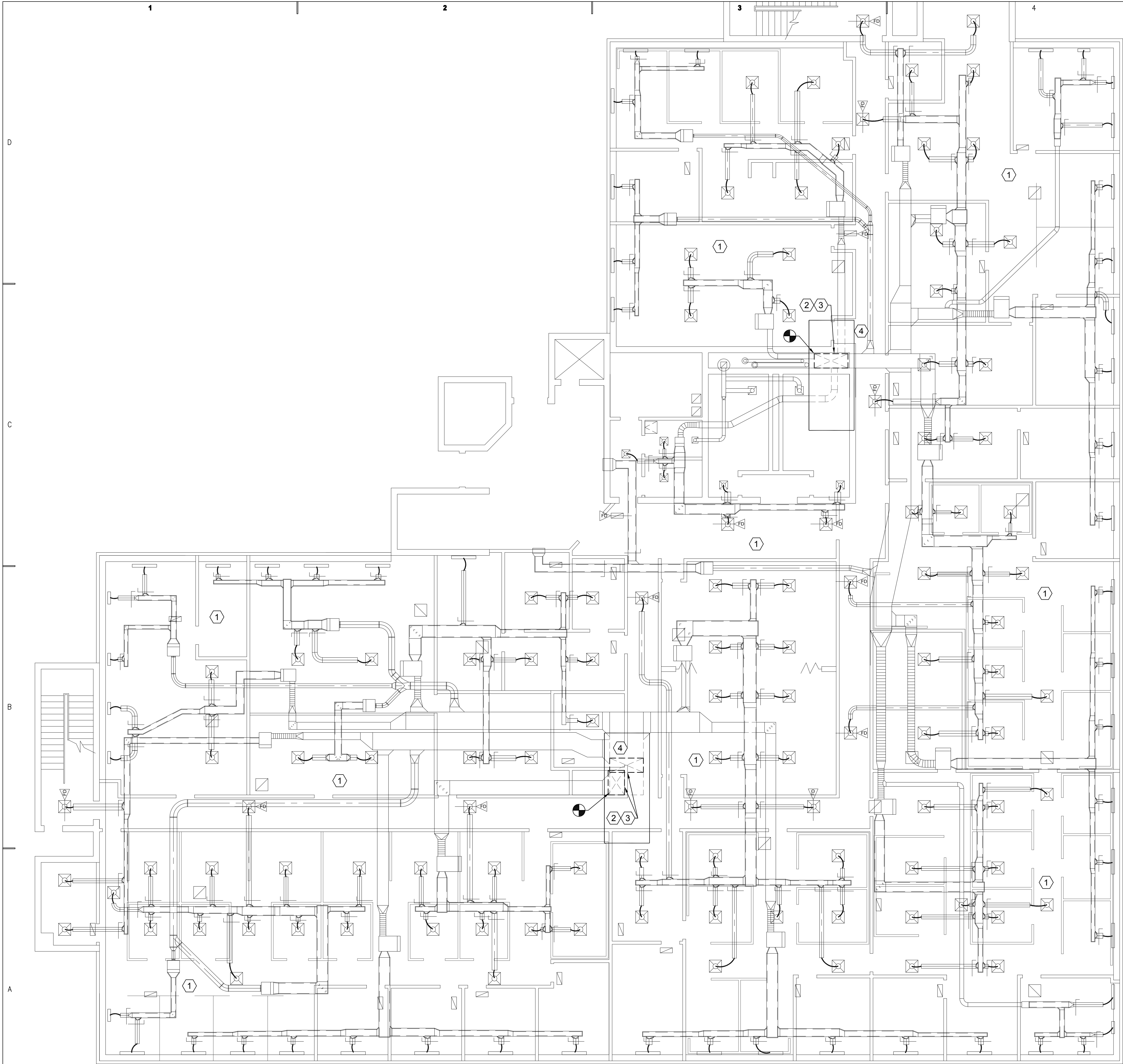
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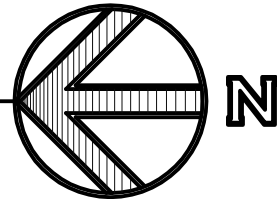
LARGE SCALE BOILER ROOM DEMOLITION PLAN

SHEET NO.

MD401



BUILDING #2-2nd FLOOR MECHANICAL PLAN
SCALE: 1/8" = 1'-0"



SHEET NOTES:

- ① EXISTING DUCTWORK, VAV BOXES, DIFFUSERS, GRILLES ETC. SHALL REMAIN. TYPICAL TOTAL FLOOR.
- ② AFTER EXISTING ROOF TOP UNITS ARE REMOVED (ONE AT A TIME) CONTRACTOR SHALL VERIFY LOCATION AND CONFIGURATION OF EXISTING DUCTS. CONTRACTOR SHALL MODIFY EXISTING DUCTS OR DUCT TO FIT AND CONNECT TO NEW ROOF TOP UNITS. COORDINATE OPENING SIZES WITH MODEL AND MANUFACTURER SELECTED
- ③ PROVIDE FLEXIBLE DUCT CONNECTION BETWEEN DUCT AND ROOF TOP CONNECTION.
- ④ DESIGN BUILD ELECTRICAL CONTRACTOR SHALL FIELD VERIFY EXISTING ELECTRICAL SERVING THE EXISTING ROOF TOP UNITS FOR REUSE FOR THE NEW UNITS RTU-1 AND RTU-2. ELECTRICAL CONTRACTOR SHALL MAKE ALL MODIFICATIONS, CHANGES, ADDITIONS, ETC. TO EXISTING ELECTRICAL SERVICE TO THE EXISTING ROOF TOP UNITS FOR CONNECTION TO NEW ROOF TOP UNITS.

NOTE:

1. ONLY ONE ROOF TOP AT A TIME MAY BE REMOVED AND REPLACED. ONE NEW UNIT SHALL BE UP AND OPERATIONAL BEFORE REMOVING AND REPLACING THE OTHER UNIT.

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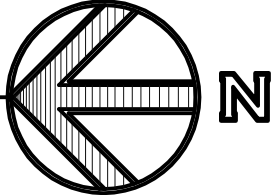


SHEET TITLE
2ND FLOOR MECHANICAL PLAN

SHEET NO.
ME101



BUILDING #2-ROOF MECHANICAL PLAN
SCALE: 1/8" = 1'-0"



SHEET NOTES:

- 1 PROVIDE NEW ROOF TOP UNITS IN PLACE OF EXISTING UNITS. REPLACE ONE UNIT AT A TIME. ONE UNIT MUST BE UP AND OPERATIONAL BEFORE THE SECOND UNIT IS REPLACED.
- 2 CONNECT TO EXISTING DUCTWORK WITH FLEXIBLE CONNECTION. SEE SHEET ME101 FOR DUCT LOCATION.
- 3 EXISTING ROOF ACCESS AND HATCH SHALL REMAIN.
- 4 EXISTING BOILER STACK SHALL REMAIN AND BE REUSED FOR NEW BOILER.
- 5 EXISTING CONDENSING UNITS, EXHAUST FANS AND ALL OTHER EQUIPMENT ON ROOF SHALL REMAIN.
- 6 MODIFY EXISTING ROOF CURB TO ACCEPT THE TYPE AND MAKE OF NEW ROOF TOP UNITS. ALL OPEN AREAS REMAINING AFTER SETTING THE NEW UNITS SHALL BE COVERED AND SEALED AIR AND WATER TIGHT WITH SHEET METAL CAP. CONTRACTOR MAY USE AN ADAPTER CURB AS LONG AS IT IS 12" OR UNDER IN HEIGHT.
- 7 ELECTRICAL DESIGN/BUILD CONTRACTOR SHALL PROVIDE EXISTING ELECTRICAL SERVICE CONNECTION TO NEW UNITS. MODIFY EXISTING SERVICE AS REQUIRED. PROVIDE NEW DISCONNECT. UNITS SHALL HAVE SINGLE SOURCE CONNECTION. PROVIDE OUTLET AS REQUIRED BY CODE.

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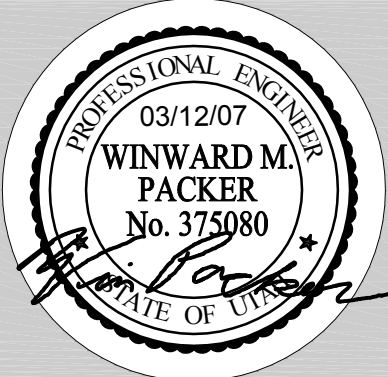
**DEPARTMENT OF
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QUALITY**

**BLDG #2 HVAC SYSTEM UPGRADE
DFCM PROJECT # 06170310**

1950 WEST 168 NORTH
SALT LAKE CITY, UT 84114

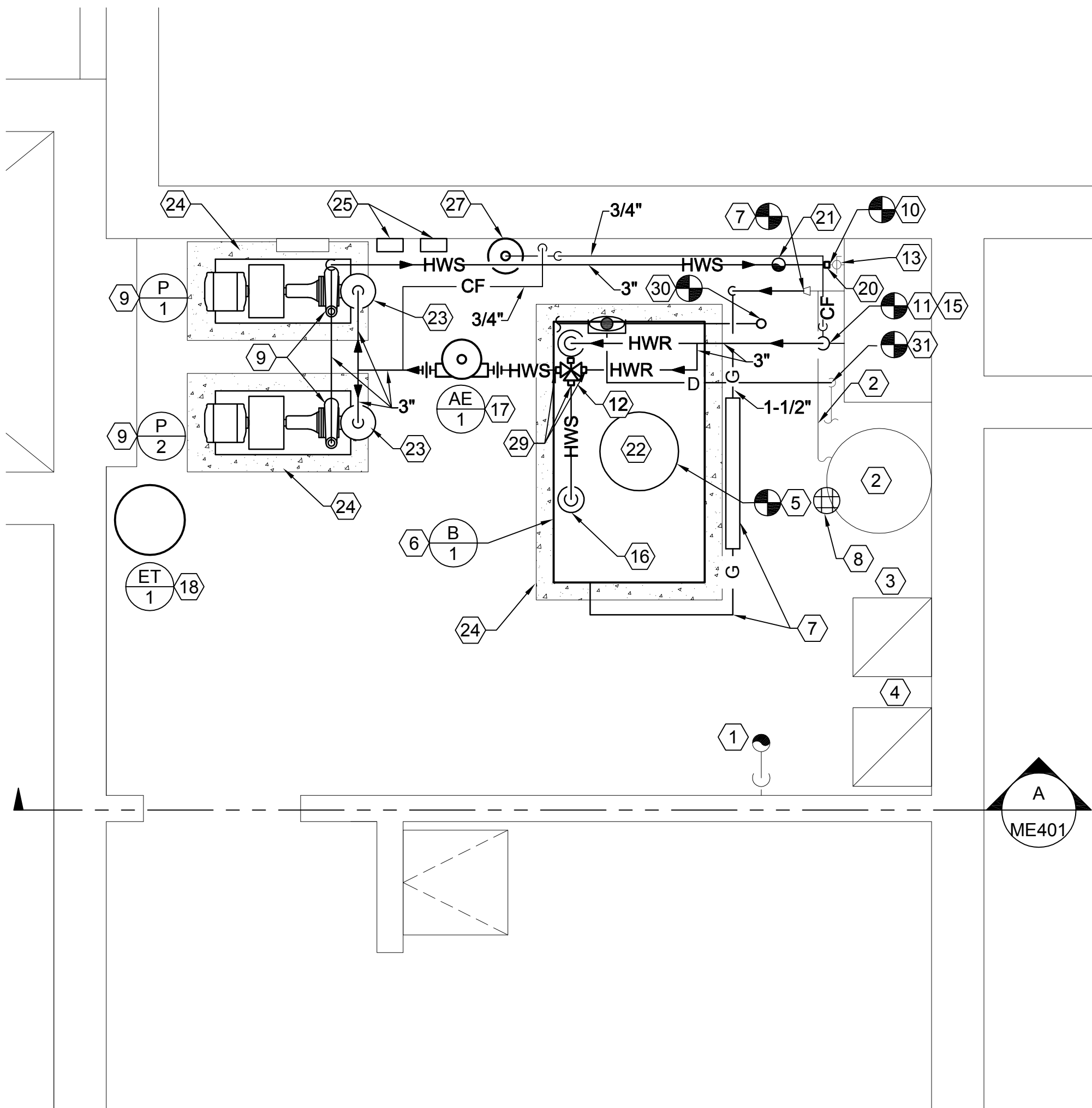
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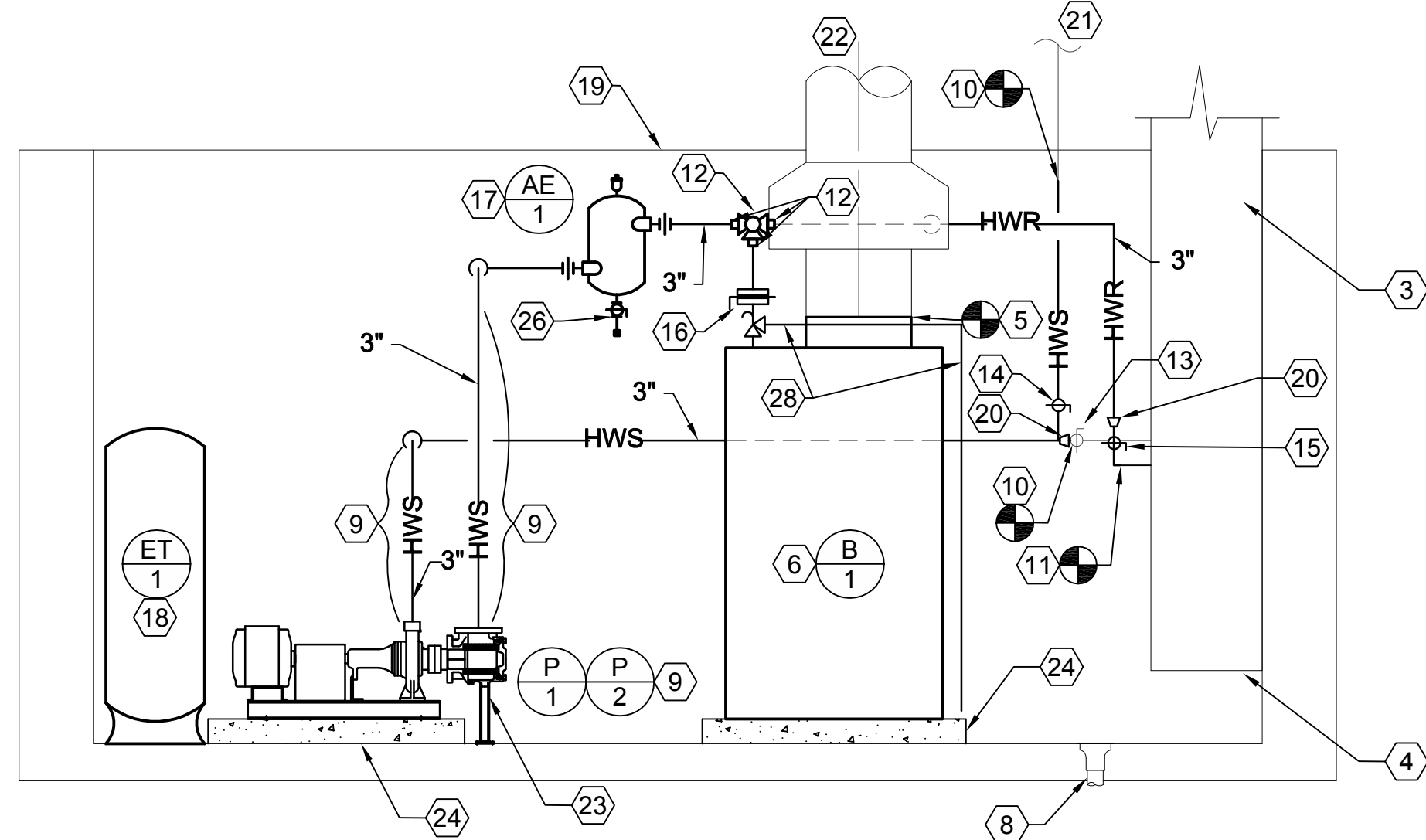
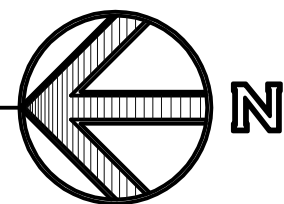
SHEET TITLE
**NEW ROOF
MECHANICAL PLAN**

SHEET NO.
ME102



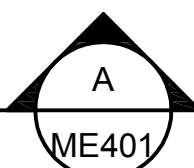
BUILDING #2-LARGE SCALE BOILER ROOM PLAN

SCALE: 1/2" = 1'-0"



BOILER ROOM ELEVATION

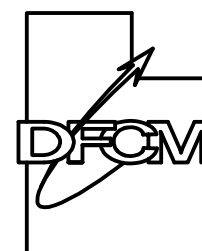
SCALE: 1/2" = 1'-0"



SHEET NOTES:

- EXISTING CULINARY DOMESTIC WATER VERTICAL PRV STATION AND BUILDING SHUT-OFF.
- EXISTING CULINARY GAS FIRED HOT WATER HEATER AND GAS LINE.
- EXISTING HIGH 18"x18" COMBUSTION AIR DUCT.
- EXISTING LOW 18"x18" COMBUSTION AIR DUCT SHALL REMAIN.
- NEW 16 "Ø FLUE. RE-CONNECT BEFORE DRAFT DIVERTER. VERIFY SIZE.
- NEW GAS FIRED HOT WATER BOILER COMPLETE WITH ALL PIPING CONNECTIONS, STACK CONNECTION, ELECTRICAL AND CONTROLS. SEE FLOW SHEET ME701.
- NEW CSD-1 GAS TRAIN, CONTROLS ETC. RE-CONNECT AT REDUCER. SEE DETAIL C5/ME501.
- EXISTING FLOOR DRAIN.
- NEW PUMPS, DISCONNECTS, STARTERS, ETC. SEE PUMP PIPING DETAIL C3/ME501.
- RE-CONNECT INTO EXISTING HWS AT THIS APPROXIMATE POINT.
- RE-CONNECT INTO EXISTING HWR AT THIS APPROXIMATE POINT.
- RE-USE EXISTING 3-WAY MIXING VALVE.
- RE-USE EXISTING 2" BALL VALVE.
- RE-USE EXISTING 2" BALL VALVE SAVED FROM DEMOLITION.
- PROVIDE NEW 2" BALL VALVE ON HWR.
- PROVIDE NEW 3" BUTTERFLY VALVE WITH TWO 125# FLANGES.
- PROVIDE NEW 3" AIR ELIMINATOR. SEE DETAIL B1/ME501.
- PROVIDE NEW FLOOR MOUNTED EXPANSION TANK. SEE DETAIL A3/ME501.
- EXISTING CEILING 8'-0" FROM FLOOR.
- PROVIDE 3"x2" CONCENTRIC REDUCERS.
- EXISTING 2" HWS TO 2ND FLOOR SHALL REMAIN.
- EXISTING FLUE THRU-ROOF SHALL REMAIN.
- PROVIDE NEW 3" SYSTEM- 2" PUMP SUCTION DIFFUSERS.
- 4" THICK CONCRETE PAD.
- PROVIDE NEW PUMP DISCONNECTS AND STARTERS. STARTERS SHALL BE THREE POSITION ON-OFF-AUTO WITH LIGHTS.
- AIR ELIMINATOR DRAIN LINE, VALVE AND HOSE CONNECTION.
- CHEMICAL POT FEEDER AND PIPING. SEE DETAIL B4/ME501.
- RELIEF VALVE PROVIDED BY BOILER MANUFACTURER. EXTEND RELIEF LINE FULL SIZE TO FLOOR AS SHOWN. ONLY ONE 90° ELL IS ALLOWED.
- PROVIDE 3" X 2-1/2" REDUCERS.
- CONNECT NEW COLD WATER MAKE-UP PIPING TO EXISTING AT ELBOX OUTLET AND EXTEND TO NEW BACKFLOW PREVENTER AND PRV STATION. SEE DETAIL A1 ON ME501 AND HOT WATER FLOW SHEET FOR PIPING REQUIREMENTS.
- CONNECT NEW TYPE L COPPER DRAIN LINE FROM NEW BACKFLOW PREVENTER AT THIS LOCATION.

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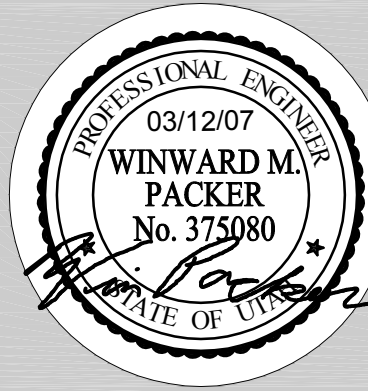
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**BLDG #2 HVAC SYSTEM UPGRADE
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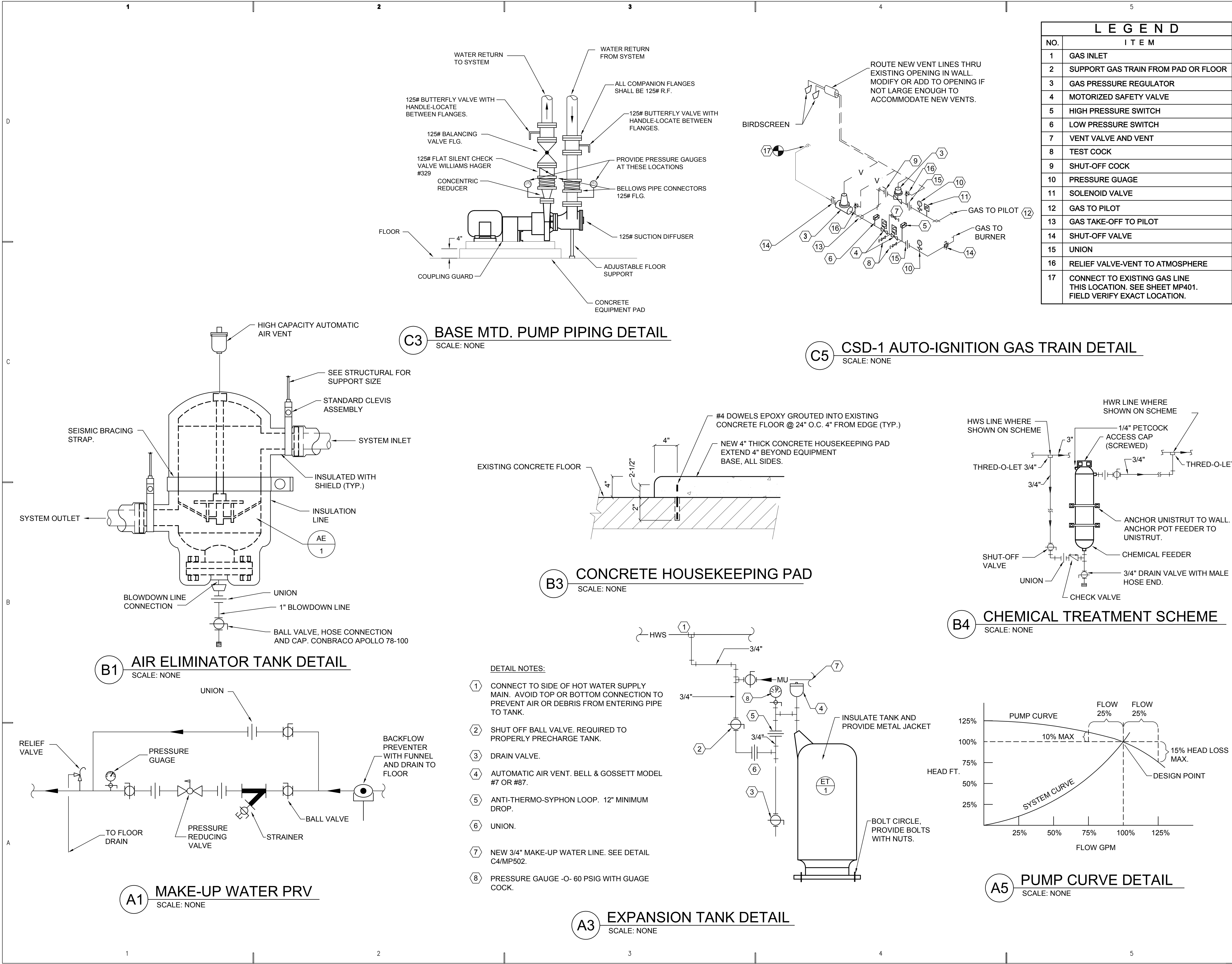
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SHEET TITLE
**LARGE SCALE BOILER ROOM
PLAN**

SHEET NO.
ME401



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BLDG #2 HVAC SYSTEM UPGRADE
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MECHANICAL DETAILS

SHEET NO.
ME501

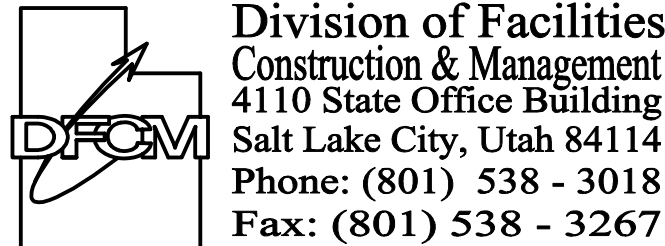
ROOFTOP AIR CONDITIONER SCHEDULE																				
SYMBOL	MANUFACTURER & MODEL NUMBER	SA CFM	OSA CFM	E.S.P. IN W.G.	COOLING			ELECTRICAL								EER/ SEER	IPLV	OPER. WT. (LBS)	COMMENTS	SCHEDULE NOTES
					AMB. AIR (DB)	AMB. AIR (WB)	MIN. TOTAL MBH	V - Ø - Hz	COMPRESSOR #	COMPRESSOR RLA (EACH)	COMPRESSOR LRA (EACH)	EVAP BLOWER HP	POWER EXHAUST FLA	MCA	MOCp					
RTU 1	CARRIER 50AK	20,000	SEE NOTES	1.5	95	65	555	460/3/60	4	16, 16, 16, 22.4	120, 120, 120, 175	30	12.6	146	175	9.5	9.7	6000		1,2,3,4,5
RTU 2	CARRIER 50AK	20,000	SEE NOTES	1.5	95	65	555	460/3/60	4	16, 16, 16, 22.4	120, 120, 120, 175	30	12.6	146	175	9.5	9.7	6000		1,2,3,4,5
1. E.S. P. DOES NOT INCLUDE LOSSES THROUGH ACCESSORIES.																				
2. RATED MINIMUM INPUT AT SEA LEVEL.																				
3. PROVIDE ONE 15 AMP, 120 VOLT, DUPLEX GFCI SERVICE OUTLET.																				
4. BELT DRIVE UNIT																				
5. PROVIDE CONTROLS TO COMMUNICATE WITH CO2 MONITORS TO MODULATE OUTSIDE AIR DAMPERS.																				

AIR ELIMINATOR SCHEDULE						
SYMBOL	CAPACITY GPM	MAX PRESSURE DROP FT.	INLET / OUTLET SIZE	FLOOD WEIGHT LBS	MAKE & MODEL	SCHEDULE NOTES
AE 1	75	0.3	3"	186	BELL & GOSSETT RL3	1
1. FOR OTHER APPROVED MANUFACTURERS SEE SPECIFICATIONS.						

PUMP SCHEDULE													
SYMBOL	TYPE	GPM	FT. HEAD	RPM	SUCTION SIZE	DISCHARGE SIZE	MOTOR			SIZE	SERVICE	MANUFACTURER	SCHEDULE NOTES
							V - Ø - Hz	HP	RPM				
P 1	BASE MOUNTED END SUCTION	75	50	1750	2"	1.5"	208/230/3/60	3	1750	1-1/2AC	HEATING HOT WATER	BELL & GOSSETT 1510	1,2
P 2	BASE MOUNTED END SUCTION	75	50	1750	2"	1.5"	208/230/3/60	3	1750	1-1/2AC	HEATING HOT WATER	BELL & GOSSETT 1510	1,2
1. ALL PUMPS SHALL BE SIZED IN THE FLAT PART OF THE CURVE. SEE DETAIL.													
2. SEE SPECIFICATIONS FOR OTHER APPROVED MANUFACTURERS.													

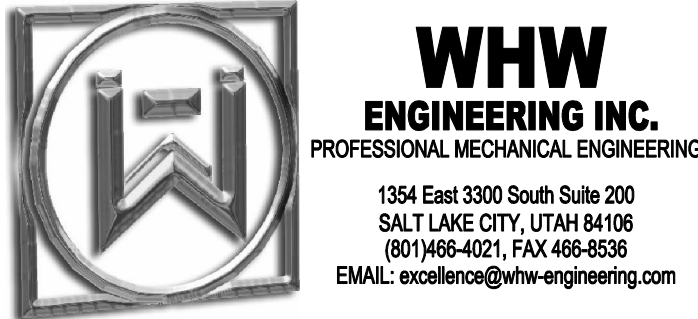
EXPANSION TANK SCHEDULE						
SYMBOL	ACCEPTANCE VOLUME/ TANK VOLUME GAL.	LENGTH	DIAMETER	OPERATION WEIGHT/ FLOOD WEIGHT (LBS)	COMMENTS	SCHEDULE NOTES
ET 1	22.6/44.4	56"	16-1/4"	146/517	BELL & GOSSETT D-80V	1
1. FOR OTHER APPROVED MANUFACTURERS SEE SPECIFICATIONS.						

BOILER SCHEDULE										
SYMBOL	MBH INPUT	MBH OUTPUT	WATER TEMP		GPM	DELTA P FT	FAN MOTOR	OPERATION WEIGHT LBS	MAKE AND MODEL #	SCHEDULE NOTES
			IN	OUT						
B 1	1,500	1,200	160°F	180°F	75		N/A	2,300	BRYAN CLM-150-W	1,2,3,4
1. BOILER RATINGS ARE FOR SEA LEVEL.										
2. SEE SPECIFICATION FOR OTHER APPROVED MANUFACTURERS.										
3. VERIFY FLUE SIZING AND MATERIAL WITH EACH BOILER MANUFACTURER AND INSTALL ACCORDINGLY.										
4. PROVIDE 120V CONTROL CIRCUIT.										



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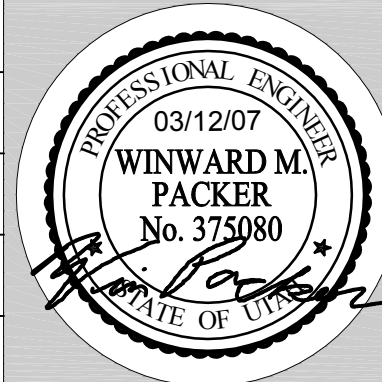
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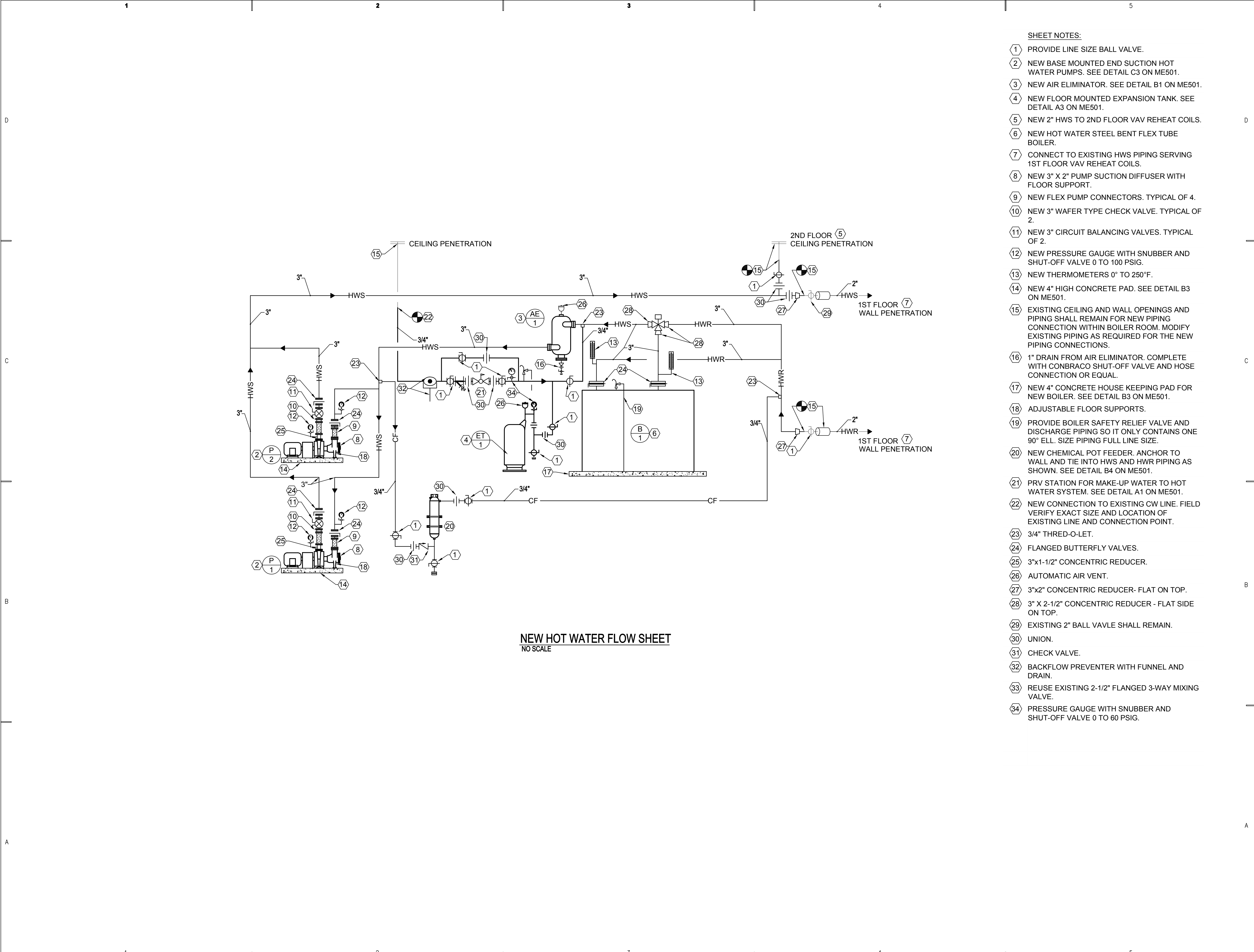
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SHEET TITLE
MECHANICAL SCHEDULES

SHEET NO.
ME601



- SHEET NOTES:**
- 1 PROVIDE LINE SIZE BALL VALVE.
 - 2 NEW BASE MOUNTED END SUCTION HOT WATER PUMPS. SEE DETAIL C3 ON ME501.
 - 3 NEW AIR ELIMINATOR. SEE DETAIL B1 ON ME501.
 - 4 NEW FLOOR MOUNTED EXPANSION TANK. SEE DETAIL A3 ON ME501.
 - 5 NEW 2" HWS TO 2ND FLOOR VAV REHEAT COILS.
 - 6 NEW HOT WATER STEEL BENT FLEX TUBE BOILER.
 - 7 CONNECT TO EXISTING HWS PIPING SERVING 1ST FLOOR VAV REHEAT COILS.
 - 8 NEW 3" X 2" PUMP SUCTION DIFFUSER WITH FLOOR SUPPORT.
 - 9 NEW FLEX PUMP CONNECTORS. TYPICAL OF 4.
 - 10 NEW 3" WAFER TYPE CHECK VALVE. TYPICAL OF 2.
 - 11 NEW 3" CIRCUIT BALANCING VALVES. TYPICAL OF 2.
 - 12 NEW PRESSURE GAUGE WITH SNUBBER AND SHUT-OFF VALVE 0 TO 100 PSIG.
 - 13 NEW THERMOMETERS 0° TO 250°F.
 - 14 NEW 4" HIGH CONCRETE PAD. SEE DETAIL B3 ON ME501.
 - 15 EXISTING CEILING AND WALL OPENINGS AND PIPING SHALL REMAIN FOR NEW PIPING CONNECTION WITHIN BOILER ROOM. MODIFY EXISTING PIPING AS REQUIRED FOR THE NEW PIPING CONNECTIONS.
 - 16 1" DRAIN FROM AIR ELIMINATOR. COMPLETE WITH CONBRACO SHUT-OFF VALVE AND HOSE CONNECTION OR EQUAL.
 - 17 NEW 4" CONCRETE HOUSE KEEPING PAD FOR NEW BOILER. SEE DETAIL B3 ON ME501.
 - 18 ADJUSTABLE FLOOR SUPPORTS.
 - 19 PROVIDE BOILER SAFETY RELIEF VALVE AND DISCHARGE PIPING SO IT ONLY CONTAINS ONE 90° ELL. SIZE PIPING FULL LINE SIZE.
 - 20 NEW CHEMICAL POT FEEDER. ANCHOR TO WALL AND TIE INTO HWS AND HWR PIPING AS SHOWN. SEE DETAIL B4 ON ME501.
 - 21 PRV STATION FOR MAKE-UP WATER TO HOT WATER SYSTEM. SEE DETAIL A1 ON ME501.
 - 22 NEW CONNECTION TO EXISTING CW LINE. FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING LINE AND CONNECTION POINT.
 - 23 3/4" THRED-O-LET.
 - 24 FLANGED BUTTERFLY VALVES.
 - 25 3"x1-1/2" CONCENTRIC REDUCER.
 - 26 AUTOMATIC AIR VENT.
 - 27 3"x2" CONCENTRIC REDUCER - FLAT ON TOP.
 - 28 3" X 2-1/2" CONCENTRIC REDUCER - FLAT SIDE ON TOP.
 - 29 EXISTING 2" BALL VAVLE SHALL REMAIN.
 - 30 UNION.
 - 31 CHECK VALVE.
 - 32 BACKFLOW PREVENTER WITH FUNNEL AND DRAIN.
 - 33 REUSE EXISTING 2-1/2" FLANGED 3-WAY MIXING VALVE.
 - 34 PRESSURE GAUGE WITH SNUBBER AND SHUT-OFF VALVE 0 TO 60 PSIG.

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PROFESSIONAL ENGINEER
03/12/07
WINWARD M. PACKER
No. 375080
STATE OF UTAH

SHEET TITLE

HOT WATER FLOW SHEET

SHEET NO.

ME701